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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,820	10/07/2004	Robert P. Rouen	68.0496	5819

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SCHLUMBERGER RESERVOIR COMPLETIONS
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EXAMINER	
ANDREWS, DAVID L	
ART UNIT	PAPER NUMBER
3672	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/711,820	ROUEN, ROBERT P.	
	Examiner	Art Unit	
	David Andrews	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendment dated 12/13/2006 has been entered.

Drawings

The objections to the drawings are withdrawn in view of amended specification of 12/13/2006.

Specification

The objections to the abstract and specification are withdrawn in view of amendments of 12/13/2006.

Response to Arguments

In regard to the rejections of claims 1-6, applicant's arguments filed 12/13/2006 have been fully considered but they are not persuasive. In response to applicant's argument that Munari fails to disclose a gas injection apparatus, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

In regard to the rejection of claims 7-14, applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Munari et al. (US 4,424,862). Munari et al. disclose a injection apparatus comprising: a tubular member defining an axial bore therethrough (5 in figure 1), the axial bore adapted to deliver a gas (8 in figure 1) into a wellbore proximate a perforation interval (2 in figure 1) via an orifice, a gas lift valve attached to the tubular member, adapted to regulate communication between the axial bore of the tubular member and the wellbore via the orifice (6 in figure 1; valve 11 in figure 2). In regard to claims 2 and 3, the gas injection apparatus is adapted to engage a sealing mechanism which is a dual-port packer (7 in figure 1). In regard to claims 4 and 5, the gas injection apparatus is adapted to inject gas proximate a gas-bearing or oil-bearing well (column 1, lines 17-20; the description of hydrocarbon-producing encompasses oil, gas and oil-gas wells). In regard to claim 6, the gas injection apparatus also inherently comprises a retrieving element attached to the tubular member (column 2, lines 19-21).

Claims 1-7, 9-11 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McCulloch (US 2,894,587). McCulloch discloses an injection apparatus comprising: a tubular member or injection device (40) defining an axial bore with an orifice adapted to deliver gas into a wellbore proximate a perforation interval (column 3, lines 46-53), a plurality of gas lift valves (44, 45) for delivering the injected gas into the

well at a location below the sealing mechanism, a dual-port packer sealing mechanism (23) engaging with the tubular member, a tubular string (22) adapted to produce fluid from the perforation interval via one port in the sealing mechanism, wherein the perforation interval is of a gas or oil bearing well (column 2, lines 14-20) and apparatus further comprises a retrieving element (48). In regard to claim 13, the apparatus of McCulloch when employed in a gas injection (column 3, lines 2-4) would involve all steps claim 13.

Claims 12 and 21-23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Moore (US 2,298,834)). Moore discloses a method for producing a well having a perforation interval comprising injecting gas (24) into the well proximate the perforation interval (valves 25 are proximate the peforations 16, figure 3). Moore also discloses a method of production by gas injection which includes plural gas lift valves (25) that actuate at different sequential pressures including a first and second valve that open at a first and second greater pressure and where the first valve closes when the gas reaches a second pressure (column 2, lines 22-39). Although Moore describes a different sequence of operating events, the disclosure of Moore which describes a particular valve opening when the pressure of the gas in one conduit is equal to the pressure of the fluid on the other side of the conduit (and closure once pressure is not equal) would function as claimed in present application when the gas pressure is sequentially increased.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Moore (US 2,298,834). McCulloch discloses all the limitations of claim 8, except for one or more gas valves on the tubular string and discloses all the limitations of claim 19, except for the plurality of valves being operated at different gas pressures. Moore discloses a production system with one or more gas lift valves (25) for injecting a gas at a location above a sealing mechanism (19; although the sealing mechanism of Moore has a different purpose than that of McCulloch, the implementation of the valves of Moore on the device of McCulloch would place the valves above the McCulloch sealing mechanism), and wherein a plurality of gas lift valves (also 25) to inject gas are actuated a different and sequential pressures (column 2, lines 22-39). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of McCulloch with the valve system of Moore in order to provide gas lift means on the production line as well as appropriately supplying injected gas within a produced fluid within a wellbore.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Moore (US 2,298,834). McCulloch discloses all the limitations of claim 14 as applied to claim 9 above, except for including a valve actuated in response to a gas pressure in a well annulus outside the tubing string exceeding a predetermined level. Moore however does disclose production tubing with a valve (25) that actuates in response to gas pressure in a well annulus outside the

tubing string exceeding a predetermined level (column 2, lines 22-39). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of McCulloch with the valve of Moore in order to only provide gas lift once the conditions are appropriately met for gas to infiltrate a pressurized production fluid.

Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Moore (US 2,228,834). McCulloch discloses all the limitations of claims 15 and 16 as applied to claim 1 above, except for disclosing that a gas lift valve is arranged on a side of the tubular to enable injected gas to pass in a radial direction or that the gas lift valves are actuated in response to different gas pressures. Moore discloses a gas lift system including gas lift valves (25) arranged on a side of the tubular member to enable injected gas to pass radially, wherein gas lift valves are actuated in response to different subsequent pressures and wherein one valve is closed once the gas reaches a second pressure (column 2, lines 22-39). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the device of McCulloch with the valve arrangements of Moore in order to further facilitate gas lift by introducing gas at appropriate levels within the wellbore produced fluid.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Waters (US 3,813,545), Raggio (US 4,392,532) and Canalizo et

al. (US 4,545,731) all disclose gas lift systems with methods for actuating valve sequences.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Andrews whose telephone number is (571) 272-6558. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Bagnell
Supervisory Patent Examiner
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DLA
2/13/07

Jennifer H. Gay
Primary Examiner